

AMENDMENT TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application.

IN THE CLAIMS

1. (CURRENTLY AMENDED) A process for the production of electrical steel sheet cores for use in electrical equipment comprising the following steps
 - a) applying of at least one coating layer of an aqueous composition 1 or aqueous composition 2 onto the surface of the electrical steel sheet, wherein said aqueous composition 1 consists of
 - A1) 100 parts per weight of one or more epoxy resins based on bisphenol-A-type, 100% of solids,
 - B1) 1 to 25 parts per weight of dicyandiamide,
 - C1) 0.1 to 10 parts per weight of additives,
 - D1) 0.1 to 120 parts per weight of at least one organic solvent as flow agent and
 - E1) 50 to 200 parts per weight of water,and wherein said aqueous composition 2 consists of
 - A2) 100 parts per weight of one or more epoxy resins based on bisphenol-A-type, mixed with first water to form an epoxy dispersion,
 - B2) 1 to 25 parts per weight of dicyandiamide,
 - C2) 0.1 to 10 parts per weight of additives,
 - D2) 0.1 to 120 parts per weight of at least one organic solvent as flow agent; and
 - ~~E2) 50 to 200 parts per weight of second water,~~wherein the combined quantity of said first water and said second water in steps A2) and step ~~E2)~~, respectively, is of such amount that said aqueous composition 2 has a solids content of 30% to 60%;

- b) drying the applied layer under increased temperature; and
- c) assembling of at least one coated electrical steel sheet obtained in step b) with at least one additional electrical steel sheet to form a sheet core and bonding the sheets with each other by thermal curing of the coating.

2-3. (CANCELED)

- 4. **(PREVIOUSLY PRESENTED)** The process according to claim 1 wherein water is added in a quantity such that a solids content of 30 to 60% is obtained for the composition of step a).
- 5. **(ORIGINAL)** The process according to claim 1 wherein the number average molar mass of the epoxy resin is from about 700 to 5000, the epoxy equivalent weight from about 400 to 6000.
- 6. **(ORIGINAL)** The process according to claim 1 wherein micronized dicyandiamide is used with an average particle size of no greater than 6 μm .
- 7. **(PREVIOUSLY PRESENTED)** The process according to claim 1 wherein diethylene glycol monobutylether is used as a flow agent in a quantity of 2 to 70 parts per weight.
- 8. **(CANCELED)**

9. (ORIGINAL) The process according to claim 1 wherein the composition is applied onto the unpretreated and uncoated electrical steel sheet as one-layer-coating with a layer thickness of 3 to 8 μm .
10. (ORIGINAL) The process according to claim 1 wherein the drying of the coating is effected at temperatures causing a PMT in the range of 230 to 260°C.
11. (ORIGINAL) The process according to claim 1 wherein the bonding and curing of the coating is effected at temperatures from 100 to 300°C and at a pressure of 1.0 to 6.0 N/mm² during a fixed time period.
12. (WITHDRAWN) An electrical steel sheets core for use in electrical equipment produced by the process according to claim 1.
13. (NEW) A process for the production of electrical steel sheet cores for use in electrical equipment comprising the following steps
 - a) applying of at least one coating layer of an aqueous composition 1 or aqueous composition 2 onto the surface of the electrical steel sheet, wherein said aqueous composition 1 consists of
 - A1) 100 parts per weight of one or more epoxy resins based on bisphenol-A-type, 100% of solids,
 - B1) 1 to 25 parts per weight of dicyandiamide,
 - C1) 0.1 to 10 parts per weight of additives,
 - D1) 0.1 to 120 parts per weight of at least one organic solvent as flow agent and
 - E1) 50 to 200 parts per weight of water, andone or more monomeric organo-metallic compounds selected from the group consisting of ortho-titanic and -zirconic acid esters;

and wherein said aqueous composition 2 consists of

- A2) 100 parts per weight of one or more epoxy resins based on bisphenol-A-type, mixed with water to form an epoxy dispersion,
 - B2) 1 to 25 parts per weight of dicyandiamide,
 - C2) 0.1 to 10 parts per weight of additives,
 - D2) 0.1 to 120 parts per weight of at least one organic solvent as flow agent; and
- one or more monomeric organo-metallic compounds selected from the group consisting of ortho-titanic and –zirconic acid esters;
- said aqueous composition 2 has a solids content of 30% to 60%;

- b) drying the applied layer under increased temperature; and
- c) assembling of at least one coated electrical steel sheet obtained in step b) with at least one additional electrical steel sheet to form a sheet core and bonding the sheets with each other by thermal curing of the coating.